In the Claims

1   1.   A method for satisfying a timer function according to
2 requirements of a customer, said method comprising the steps
3 of:
4   providing a programmable timer module having a power
5 supply circuit unit, an output circuit unit, and a timer
6 processor system including a memory for storing a timer module
7 program;
8   providing a program builder system;
9   distributing said programmable timer module to said
10 customer, wherein said module is in either an unprogrammed or
11 reprogrammable state;
12   maintaining at least a part of said program builder
13 system at a supplier's place of business;
14   making available a model number data page to a customer
15 at a customer's place of business, said model number data page
16 including a plurality of timer model numbers correlated with
17 information pertaining to each model number;
18   receiving a model number request from a customer at said
19 supplier's place of business, said model number request being
20 made in accordance with said information of said model number
21 data page;
22   building a timer operating program at said supplier's
23 place of business using said at least a portion of said
24 program builder system based on said model number request;
25   transmitting said program to said customer's place of
26 business; and
27   loading said program into said timer module.

1   2.   The method of claim 1, wherein said transmitting step
2   includes the step of sending said program to said customer via
3   a network communication link.

1   3.   The method of claim 1, wherein said program builder
2   system includes a personal computer.

1   4.   The method of claim 1, wherein said program builder
2   system includes a first personal computer positioned at a
3   supplier's place of business, for use in building said timer
4   program, and a second personal computer at said customer's
5   place of business for use in transmitting said program to said
6   timer module.

1   5.   The method of claim 1, wherein said making available
2   step includes the step of displaying said page on an
3   electronic display.

1   6.   The method of claim 1, wherein said making available
2   step includes the step of printing said page on a paper
3   substrate.

1   7.   The method of claim 1, wherein said transmitting and
2   said loading steps are executed simultaneously.

1   8.   A method for satisfying a timer function, said method
2   comprising the steps of:
3   making a programmable timer module;
4   distributing said timer module to a customer;
5   establishing a program builder system, and maintaining at
6   least part of said builder system at a supplier's place of

47

7 business;

8   providing a model number data page;

9   making available said model number data page to said

10 customer;

11   receiving a model number request from said customer at

12 said supplier's place of business;

13   building a timer module program at said suppliers place

14 of business using said at a least a portion of a timer builder

15 system; and

16   transmitting said program to said customer.

1   9.   The method of claim 8, wherein said making of said

2 timer module step includes the step of including an initiate

3 circuit in said timer module.

1   10. The method of claim 8, wherein said making step

2 includes the step of including a power supply circuit unit in

3 said timer module.

1   11. The method of claim 8, wherein said making step

2 includes the step of including a output circuit unit in said

3 timer module.

1   12. The methods of claim 8, wherein said program builder

2 system comprises a personal computer.

1   13. The method of claim 8, wherein said program builder

2 system comprises an in-circuit device programmer.

1   14. The method of claim 8, wherein said program builder

2 system comprises an emulator.

1   15.   A programmable timer module system comprising:

2   a programmable timer module;

3   a model number data page correlating timer model numbers

4   with information pertaining to each model number;

5   a program builder system responsive to timer model number

6   inputs, wherein said program builder builds a certain timer

7   program based on which of a model number input is input into

8   said program builder system; and

9   a breakable communication link between said programmable

10   timer module and said program builder system, for allowing

11   said program, built by said program builder system, to be

12   loaded into said programmable timer module.

1   16.   The system of claim 15, wherein said timer module

2   comprising:

3   a timer processor system;

4   an output unit; and

5   a resistance-varying adjustment mechanism in

6   communication with said processor system.

1   17.   The system of claim 16, wherein at least a part of

2   said model number data page is electronically displayed.

1   18.   The system of claim 17, wherein at least a part of

2   said data page is accessible by accessing a supplier's

3   website.

1   19.   The system of claim 16, wherein said timer module

2   includes an initiate circuit unit, a contact circuit unit, and

3   a power supply circuit unit incorporated in a single housing.

49

1   20.   The system of claim 16, wherein said model number
2   data page is established so that at least one character of a
3   model number selectable using said model number data page
4   designates an operating parameter of said timer module.

1   21.   The system of claim 15, further comprising a
2   parameter reader unit, adapted for communication with said
3   module, wherein said parameter reader unit includes a display,
4   wherein said reader unit is adapted to display a parameter of
5   said module.

1   22.   The system of claim 15, further comprising a reader
2   module having a display, adapted for communication with said
3   timer module, said reader module adapted to display at least
4   one of a reprogramming status or function of said timer
5   module.

1   23. The system of claim 15, wherein said program builder
2   system is adapted to parse out characters from said model
3   number input.

1   24. The system of claim 15, wherein said program builder
2   system is adapted to receive said model number input
3   information via a plurality of different input windows.

1   25.   The system of claim 15, wherein said program builder
2   system is switchable between a first mode, wherein said
3   program builder system builds a timer operating program
4   automatically based on model number input data, and a second
5   mode wherein said program builder system allows custom-
6   building of said timer operating program.

1   26. The system of claim 15, wherein said program builder
2 system is adapted to build a timer operating program which
3 comprises a plurality of subfunction code segments, and a
4 subfunction ordering table.

1   27. A method for establishing a timing function
2 according to needs of a customer, said method comprising the
3 steps of:
4   providing a timer module;
5   creating a timer program builder system
6   creating a model number data page;
7   making available at least said model number data page to
8 a customer;
9   receiving a model number request from said customer;
10   building a timer program in accordance with said request
11 using said timer program builder system;
12   transmitting said built program to said customer; and
13   loading said program into said module.

1   28. The method of claim 27, wherein said timer module
2 includes a resistance-varying mechanical adjustment mechanism
3 for use in manually adjusting a time delay.

1   29. The method of claim 27, wherein said transmission
2 step includes the step of transmitting said program to said
3 customer via a computer network link.

1   30. The method of claim 27, wherein said transmitting
2 step includes the step of shipping a transportable storage
3 medium storing said program stop said customer.

1   31.   The method of claim 27, wherein hardware of said
2 timer module enables said timer module to become any one of a
3 delay on make, delay on break, single shot, or recycling timer
4 depending on instructions of said built program.

1   32. A timer module system for establishing timing
2 characteristics of a timer, said system comprising:
3   a timer module circuit including
4   a power supply for converting a line voltage into DC
5 voltage;
6   an output control circuit; and
7   a timer processor system in communication with said
8 power supply and said output control unit, said timer
9 processor system having a program memory; and
10   a program builder system in breakable communication with
11 said timer module circuit for building a timer module program.

1   33.   The system of claim 32, further comprising a model
2 number data page correlating timer model numbers with
3 information pertaining to each model number.

1   34.   The system of claim 32, wherein said timer module
2 circuit further comprises an initiate circuit unit, an output
3 circuit unit, and a resistance varying adjustment mechanism.

1   35.   The system of claim 32, wherein at least a portion
2 of said program builder system is positioned in a place of
3 business of a customer.

1   36.   The system of claim 37, wherein said module is
2 adapted to provide a plurality of time delays.

52

1   37. The system of claim 32, further comprising a reader

2 unit having a dedicated reader unit housing and a display,

3 said reader unit housing being adapted for breakable

4 communication with said timer module, said reader unit adapted

5 for communication with said output circuit of said module, and

6 being adapted to be responsive to said output circuit to

7 display on said display time delay of said module.

1   38. The system of claim 32, further comprising a reader

2 module having a display adapted for breakable communication

3 with said program memory, said reader module adapted to read

4 program information from said program memory and being further

5 adapted to display at least one of the reprogramming status,

6 an operating parameter, or a function of said timer module.